

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method of dynamically re-allocating a frequency spectrum to a plurality of radio networks (~~RNs; 16~~) in accordance with a predefined spectrum allocation scheme, wherein a spectrum resource has previously been allocated to each RN ~~(16)~~ or group of RNs ~~(16,16')~~, comprising:

generating an electronic spectrum request for a RN ~~(16)~~ or a group of RNs ~~(16, 16')~~; and

transmitting the electronic spectrum request via a communications network ~~(18)~~ to a server infrastructure ~~(12)~~ which also receives electronic spectrum requests for other RNs ~~(16)~~, the server infrastructure ~~(12)~~ processing the received electronic spectrum requests in accordance with the spectrum re-allocation scheme to reallocate the spectrum resources to the plurality of RNs ~~(16)~~.

2. (Original) The method of claim 1, wherein the re-allocation is performed continuously or wherein the re-allocation is performed quasi-continuously.

3. (Currently Amended) The method of claim ~~1 or 2~~, further comprising determining a service quality of one of the RNs ~~(16)~~ taking into account the actual or predicted traffic on the RN's ~~(16)~~ spectrum resource and generating the electronic spectrum request in dependence of the service quality.

4. (Currently Amended) The method of ~~claim one of claims 1 to 3~~, wherein the whole frequency spectrum is re-allocated.

5. (Currently Amended) The method of ~~claim one of claims 1 to 3~~, wherein only a portion of the frequency spectrum is re-allocated and wherein the portion

of the frequency spectrum to be re-allocated is taken from the individual RNs' (16) spectrum resources according to a predefined contribution scheme.

6. (Currently Amended) The method of claim one of claims 1 to 5, wherein the spectrum allocation scheme is based on spectrum credits relating to elementary spectrum units.

7. (Currently Amended) The method of claim 6, wherein each RN (16) or group of RNs (16, 16') is assigned the same or an individual first number of spectrum credits and wherein an electronic spectrum request for an RN (16) comprises a specification of a second number of spectrum credits representative of the requested spectrum resource.

8. (Currently Amended) The method of claim 6 or 7, wherein the communications network (18) allows to reassign the spectrum credits among the plurality of RNs (16).

9. (Currently Amended) The method of claim one of claims 6 to 8, wherein the spectrum credits have a limited temporal validity.

10. (Currently Amended) The method of claim one of claims 1 to 9, wherein the spectrum re-allocation scheme is auction-based and wherein the electronic spectrum requests comprise electronic bids submitted via the communications network (18).

11. (Currently Amended) The method of claim 10, wherein the electronic bids relate to one or more frequency bundles comprised within the frequency spectrum and wherein a specific frequency bundle is re-allocated to the RN (16) associated with the best electronic bid.

12. (Currently Amended) The method of claim 11, wherein, prior to the next re-allocation process for all RNs ~~(16)~~, the specific frequency bundle or a part thereof re-allocated to the RN ~~(16)~~ or group of RNs ~~(16, 16')~~ associated with the best electronic bid is allocated to another RN ~~(16)~~ or group of RNs ~~(16, 16')~~.

13. (Original) The method of claim 10, wherein the frequency spectrum to be re-allocated is partitioned bid-proportionally.

14. (Currently Amended) The method of claim one of claims 10 to 13, wherein the electronic bids are submitted iteratively.

15. (Currently amended) A computer program product for dynamically re-allocating a frequency spectrum to a plurality of radio networks in accordance with a predefined spectrum allocation scheme, wherein a spectrum resource has previously been allocated to each RN or group of RNs, comprising program code portions for:
performing the steps of claims 1 to 14
generating an electronic spectrum request for a RN or a group of RNs and
transmitting the electronic spectrum request via a communications network to a server infrastructure which also receives electronic spectrum requests for other RNs, the server infrastructure processing the received electronic spectrum requests in accordance with the spectrum re-allocation scheme to reallocate the spectrum resources to the plurality of RNs.

16. (Canceled)

17. (Currently Amended) A system for dynamically re-allocating a frequency spectrum to a plurality of radio networks ~~(RNs; 16)~~ in accordance with a predefined spectrum re-allocation scheme, wherein a spectrum resource has previously been allocated to each RN ~~(16)~~ or group of RNs ~~(16, 16')~~, comprising:
a communications network ~~(18)~~;

at least one RN infrastructure (~~A, B, C, D~~) with one or more RNs (~~16, 16'~~), means ~~(14)~~ for generating an electronic spectrum request, and means ~~(14)~~ for transmitting the electronic spectrum request via the communications network; and

a server infrastructure ~~(12)~~ in communication via the communications network ~~(18)~~ with the at least one RN infrastructure (~~A, B, C, D~~), the server infrastructure ~~(12)~~ having means for receiving electronic spectrum requests and means for processing the received electronic spectrum requests in accordance with the spectrum re-allocation scheme to re-allocate the spectrum resources to the plurality of RNs ~~(16)~~.

18. (Original) The system of claim 18, configured as an electronic auction network.

19. (Currently Amended) A server infrastructure ~~(12)~~ for dynamically re-allocating a frequency spectrum to a plurality of radio networks (~~RNs; 16~~) in accordance with a predefined spectrum re-allocation scheme, wherein a spectrum resource has previously been allocated to each RN ~~(16)~~ or group of RNs ~~(16)~~, comprising:

means for receiving electronic spectrum requests in communication via a communications network ~~(18)~~ with at least one RN infrastructure ~~(A, B, C, D)~~; and

means for processing the received electronic spectrum requests in accordance with the spectrum re-allocation scheme to re-allocate the spectrum resources to the plurality of RNs ~~(16)~~.

20. (Currently Amended) A radio network ~~(RN)~~ infrastructure ~~(A, B, C, D)~~ utilizing a previously allocated spectrum resource, comprising:

at least one RN ~~(16)~~; and

a device ~~(14)~~ for generating an electronic spectrum request and for transmitting the electronic spectrum request via a communications network ~~(18)~~ to a server infrastructure ~~(12)~~ which also receives electronic spectrum requests for other RNs ~~(16)~~, the server infrastructure ~~(12)~~ processing the received spectrum requests in accordance with a predefined spectrum re-allocation scheme to re-allocate a spectrum resources to the at least one RN ~~(12)~~.